REMARKS

Claims 1-3, 12, 13, 26, 27, 31-33 and 37-39 are pending. Claims 4-11, 14-25, 28-30 and 34-36 have been withdrawn. Claims 1, 26 and 37 have been amended. No new matter has been added. Support for the claim amendments can be found on the page 9, lines 29 to page 10, line 3 and page 14 of the specification.

The specification has also been amended to correct a typographical error in the last paragraph on page 14. Support for this amendment can be found at, for example, page 9, line 29 of the specification.

The Examiner's remarks in the last Office Action are addressed below. It is believed that the claims and all dependent claims, taken in light of the remarks made herein, meet all criteria for patentability.

OBJECTION TO THE SPECIFICATION

The Examiner has required amendment of the paragraph in the specification to include "the status of the prior applications of 09/397,432 and 09/160,458" (see Office Action at pages 3-4). The specification has been amended accordingly. The specification has also been amended such that the paragraph containing the priority claim is now the first sentence of the application following the title. No new matter has been added.

Rejection under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1-3, 12, 13, 26, 27, 31-33 and 37-39 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,674,698 to Zarling et al. ("Zarling"). See Office Action at pages 5-6. Claims 1, 26 and 37 are independent claims.

Applicants have discovered a library of compounds, wherein each compound in the library is bound to an individual support. Each support has associated therewith more than one population of semiconductor nanocrystals. Each population has a distinct characteristic spectral emission. Each nanocrystal includes a Group II-VI semiconductor, a Group III-V semiconductor, a Group IV semiconductor, or an alloy or mixture thereof. See independent claim 1.

Applicants have further discovered a chemical library that includes a plurality of member chemicals, wherein each member chemical is bound to a support. Each support has associated therewith more than one population of semiconductor nanocrystals. Each population has a distinct characteristic spectral emission. Each nanocrystal includes a Group II-VI semiconductor, a Group III-V semiconductor, a Group IV semiconductor, or an alloy or mixture thereof. See independent claim 26.

Applicants have also discovered a library of polypeptides that includes a plurality of polypeptides, wherein each polypeptide in the library is bound to an individual support. Each support has associated therewith more than one population of semiconductor nanocrystals. Each population has a distinct characteristic spectral emission. Each nanocrystal includes a Group II-VI semiconductor, a Group III-V semiconductor, a Group IV semiconductor, or an alloy or mixture thereof. See independent claim 37.

The Examiner contends that Zarling discloses an up-converting phosphor particle that includes "an absorber (refers to the instant claimed [] shell layer overcoating the core) and the emitting center (refers to instant claimed core) such that the combination of absorber and emitter produces emission spectra (refers to instant claimed functional property of the nanocrystal ...." See Office Action at page 6.

Zarling discloses "labels, detection methods and detection apparatus which permit ultrasensitive detection of cells, biological macromolecules, and other analytes, which can be used for multiple target detection and target discrimination." See col. 5, lines 23-26. Specifically, Zarling discloses the use of "fluorescent labels that are excited by an excitation wavelength and subsequently emit electro magnetic radiation at up-shifted frequencies." See col. 12, lines 56-59. The emitting center and the absorber described in Zarling is not a semiconductor nanocrystal core overcoated by a semiconductor shell. See col. 14, lines 15-50. Zarling does not describe a nanocrystal that includes a Group II-VI semiconductor, a Group III-V semiconductor, a Group IV semiconductor, or an alloy or mixture thereof. . See independent claims 1, 26 and 37. Accordingly, independent claims 1, 26 and 37 are not anticipated by Zarling. Claims 2-3, 12, 13, 27, 31-33 and 38-39 depend from claims 1, 26 and 37 and are therefore patentable over Zarling for at least the reasons described above. Applicants respectfully request reconsideration and withdrawal of this rejection.

Rejection under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-3, 12, 13, 26, 27, 31-33, and 37-39 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,770,358 to Dower et al. ("Dower") in view of U.S. Patent No. 5,990,479 to Weiss et al. ("Weiss"). See Office Action at pages 7-8. Claims 1, 26 and 37 are independent claims.

As acknowledged by the Examiner, Dower discloses a "library compr[ising] oligomers bound to [] solid supports and labeled with identifier tags ...." See Office Action at page 7. Weiss discloses "[a] luminescent semiconductor nanocrystal compound ...." See Abstract. None of the cited references teach or suggest a support having associated therewith more than one population of semiconductor nanocrystals. See independent claims 1, 26, and 37. Weiss, at most, describes a single population of semiconductor nanocrystals and as acknowledged by the Examiner, Dower does not disclose "semiconductor nanocrystal labels." See Office Action at page 7.

Since claims 2-3, 12, 13, 27, 31-33, and 38-39 are dependent on claims 1, 26 and 37 respectively and share the same features, dependent claims 2-3, 12, 13, 27, 31-33, and 38-39 are patentable over the combination of Dower and Weiss. Applicants respectfully request reconsideration and withdrawal of this rejection.

Obviousness-type double patenting rejection

Claims 1, 3, 12, 13, 26, 27, 32, 33, 37, and 39 have been rejected "on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, and 10-12" of U.S. Patent No. 6,326,144 in view of U.S. Patent No. 5,770,358. See Office Action at pages 9-10. Claims 1-3, 12, 13, 26, 27, 31-33 and 37-39 have been rejected "on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 6, 7, 8, 9, 16-20" of U.S. Patent No. 6,617,583 in view of U.S. Patent No. 5,770,358. See Office Action at pages 11-12.

A terminal disclaimer under 37 C.F.R. § 1.321(c) is being filed with this reply to obviate the double patenting rejections over each of U.S. Patent No. 6,326,144 and U.S. Patent No. 6,617,583. In view of the terminal disclaimer being filed with this reply, Applicants respectfully

request that the rejections under the judicially created doctrine of obviousness-type double patenting be reconsidered and withdrawn.

CONCLUSION

For the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the pending rejections. Applicants believe that the claims are in condition for allowance.

A check for $120 for a one month extension fee is enclosed. Should any fees be required by the present Amendment, the Commissioner is hereby authorized to charge Deposit Account **19-4293**.

If, for any reason, a telephonic conference with the Applicant would be helpful in expediting prosecution of the instant application, the Examiner is invited to call Applicants' Attorney at the telephone number provided below.

Respectfully submitted,

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